IN THE CLAIMS:

Please amend the claims as follows:

1. (Thrice amended) An isolated human hGT1 gene sequence comprising a transcribed polymorphic CAG repeat having the sequence $(CAR)_2(CAG)_nCAA$, wherein R is A or G and n is from 7 to 12 as set forth in SEQ ID NOs:12-17, wherein allelic variants of said CAG repeat are associated with a disorder selected from the group consisting of psychiatric diseases, schizophrenia, affective disorders, neurodevelopmental brain diseases and phenotypic variability with respect to long term response to neuroleptic medication, and wherein n being equal to 11 (SEQ ID NO:6) is the most common allele of the hGT1 gene;
and wherein said polymorphic CAG repeat encodes a polyglutamine repeat having the sequence $GlnGln(Gln)_nGln$, wherein n is from 7 to 12.

2. (Amended) The gene sequence of claim 1, wherein said affective disorder is manic depression.

3. (Thrice amended) A method for evaluating the severity of schizophrenia of a patient, which comprises the steps of:

a) obtaining a nucleic acid sample of said patient; and
b) determining allelic variants of said CAG repeat of the gene sequence of claim 1,

wherein allelic variants shorter than when n=11 (SEQ ID NO:16), are indicative of less severe schizophrenia in the patient.

4. (Twice Amended) A method for the identification of the response of a patient to neuroleptic medication, which comprises the steps of:

a) obtaining a nucleic acid sample of said patient; and
b) determining allelic variants of said CAG repeat of the gene sequence of claim 1,

wherein allelic variants shorter than when n=11, are indicative of a neuroleptic response by said patient.

5. The method of claim 4, wherein said shorter allelic variants have a n equal to 8, 9 or 10 as set forth in SEQ ID Nos:13, 14 or 15.

9. (Twice Amended) A method of categorizing a psychiatric patient according to its genotype in order to maximize its response to treatment to at least one neuroleptic drug, which comprises the steps of:

a) obtaining a nucleic acid sample of said patient; and

b) determining allelic variants of said CAG repeat of the gene sequence of claim 1,

wherein a patient is categorized with respect to his allelic variants, and wherein allelic variants shorter than when n=11, are indicative of a neuroleptic response of said patient, thereby categorizing said psychiatric patient according to its genotype to maximize neurolopeptic drug treatment.

10. (Twice Amended) A method of identifying a patient which is responsive to a neuroleptic medication which comprises:

a) obtaining a sample from said patient; and

b) determining allelic variants of said CAG repeat of the gene sequence of claim 1,

wherein allelic variants shorter than when n=11, identify said patient as a neuroleptic responder.

11. The method of claim 10, wherein said sample is a nucleic acid sample and wherein shorter allelic variants have a n equal to 8, 9 or 10.

13. (Twice Amended) The human gene sequence of claim 1, wherein n is selected from the group consisting of 7, 8, 9, 10 and 12, and wherein said allelic variant is associated with schizophrenia.

14. (Twice Amended) The human gene sequence of claim 13, wherein n is selected from:

a) n is 7 to 10, wherein said allelic variant is associated with a neuroleptic medication-responsive status of a schizophrenic patient, and

b) n is equal to 12, wherein said allelic variant is associated with a poor responsive status of a schizophrenic patient to neuroleptic medication.

15. (Twice Amended) The human gene sequence of claim 1, wherein n is equal to 11, which comprises the sequence as set forth in SEQ ID NO:2.

16. (Twice Amended) The human gene sequence of claim 15 comprising the sequence as set forth in SEQ ID NO:5.

17. An isolated nucleic acid sequence comprising the sequence as set forth in SEQ ID NO:2.

18. The isolated nucleic acid sequence of claim 17 comprising the sequence as set forth in SEQ ID NO:5.

19. An isolated nucleic acid sequence comprising a sequence encoding the amino acid sequence as set forth in SEQ ID NO:6.

20. A vector which expresses the isolated nucleic acid sequence of claim 17.

21. A vector which expresses the isolated nucleic acid sequence of claim 18.

22. A vector which expresses the gene of claim 1.

23. A cell harboring the vector of claim 20.

24. A cell harboring the vector of claim 21.

25. A cell harboring the vector of claim 22.